



Attorney Docket No.: HYD 2-017

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)
James A. Kime)
Serial No. 10/787,519) Examiner Steven J. Ganey
Filed: February 26, 2004) Group Art Unit 3752
For: Method and Apparatus for Depositing)
Snow-Ice Treatment Liquid On)
Pavement)

COMMISSIONER OF PATENTS
P.O. BOX 1450
ALEXANDRIA, VA 25313-1450

DECLARATION UNDER 37 CFR § 1.132

James A. Kime declares as follows:

- 1) That he is a resident of the State of Ohio and is president of H.Y.O., Inc., having a place of business at 2550 West Fifth Avenue, Columbus, Ohio 43204;
- 2) That he holds a Bachelor of Mechanical Engineering degree from The Ohio State University;
- 3) That he is a registered professional engineer in and for the State of Ohio;
- 4) That he has been involved in the design and analysis of hydraulically driven mechanisms since about 1960;
- 5) That he has been involved in the design and investigation of snow-ice treatment vehicles since about 1972;
- 6) That he holds about nineteen United States patents;
- 7) That he is the inventor named in the above-identified application for United States patent;
- 8) That he has observed that claims 1-6, 9, 11, 13, 15, 17-21, 30, 33 and 38-42 have been rejected under § 102 of the Patent Statute as being anticipated by Oligschlaeger, U. S. Patent No. 5,911,363 (Oligschlaeger);
- 9) That the method and apparatus described and claimed in the above-identified application achieves a product which accurately deposits brine on a highway lane at a fixed quantity in terms of gallons per mile in conjunction with variations in vehicle speed and without creating brine wasting, dangerous back splash and fogging phenomena;

- 10) That by accurately depositing the brine, for example, at 30 gallons per mile per nozzle, substantial cost savings through the lowering of salt requirements are realized with corresponding environmental advantages;
- 11) That such accurate brine depositions from two nozzles operating with a 1200 gallon brine tank supply will provide for the treatment of about twenty miles of pavement lane;
- 12) That accurate brine deposition without splash and waste is achieved by locating the streamer nozzles in spaced adjacency with lane pavement surface in a manner wherein each nozzle axis is substantially parallel with such pavement surface and vehicle forward direction with a brine pump driving arrangement wherein vehicle velocity is monitored to control pump speed in correspondence with nozzle diameter to achieve a fluid flow velocity vector substantially parallel with pavement surface and corresponding with vehicle forward velocity;
- 13) That his company has enjoyed commercial success in connection with equipment as described in the above-identified application for United States patent;
- 14) That Figs. 5 and 6 of Oligschlaeger clearly illustrate that the axes of variable nozzles 21-24 are not oriented in parallel with both pavement surface and vehicle forward velocity;
- 15) That at column 1, line 42-44, Oligschlaeger indicates that apparatus with fixed orifice nozzles must be replaced to attain new application rates, however, transportation departments essentially universally specify a single application rate;
- 16) That at column 2, lines 13-16, Oligschlaeger indicates that nozzle pressures for a final orifice become prohibitively high at higher speeds and that this statement is not true;
- 17) That the fixed orifice nozzles as described in connection with Fig. 10 of the above-identified application work very well over a wide range of speeds including speeds of 60 miles an hour or greater;
- 18) That Oligschlaeger at column 2, lines 18-23 indicates that fixed nozzle systems are generally inadequate because of the limited ground spraying range and the necessity for changing multiple nozzles for different spray rates, this statement being untrue;

- 19) That in the winter of 2004, he participated in an evaluation of a brine depositing system essentially the same as shown in Oligschlaeger;
- 20) That the evaluation was conducted by the City of Columbus, Ohio and the brine depositing equipment was assembled by Swenson Spreader Company, a subsidiary of The Lewis Berkman Winter Products Company of Lindenwood, IL, a respected manufacturer of snow/ice control equipment;
- 21) That evaluation was made in conjunction with a 1200 gallon brine tank which was filled with brine and the deposition of brine on a highway in Franklin County, Ohio was observed from a chase car driven by a Swenson Spreader Company employee and positioned about 100 feet behind the brine depositing truck;
- 22) That an employee of his company was seated in the forward passenger position and videotaped the demonstration while he observed from a rear seat;
- 23) That the demonstration resulted in a determination that the brine deposition system evaluated did not perform adequately, evidencing substantial and improper deposition with a brine consumption resulting in the emptying of the 1200 gallon tank within 4-6 miles of operation indicating a general deposition rate of about 200 gallons or more per mile of multi-lane deposition;
- 24) That he has observed that claims 14, 16, 32, 34 and 43 have been rejected under § 103 of the Patent Statute as being unpatentable over Oligschlaeger, the Examiner indicating that the location of the nozzle above the pavement surface is a matter of design choice;
- 25) That this observation of the Examiner is incorrect in that ejecting the brine to derive zero relative velocity with respect to the pavement at a close distance to the pavement provides for a short dwell time of the ejected brine above the pavement before settling upon it and further such proximity takes advantage of any surface effects tending to avoid turbulence induced disruption;
- 26) That with respect to claim 34, the Examiner indicates that it is well known to provide plows on the front of vehicles to remove excess snow before the application of liquid treatment material, and that such observation fails to recognize that the brine deposition is carried out before the commencement of inclement weather and that for the purposes of the invention, the plow performs as a wind deflector permitting a turbulence free deposition of brine beneath the truck;

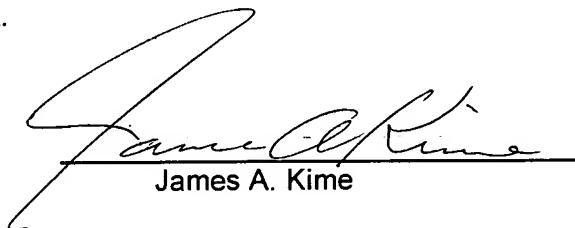
27) That a copy of the pertinent components of the video taping carried out during the demonstration are available to the Examiner;

28) I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Further Declarant sayeth naught.

Date

12/28/05


James A. Kime

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited on February 21, 2006 with the United States Postal Service as first class mail in an envelope addressed to:

Mail Stop Amendment
Commissioner of Patents
P. O. Box 1450
Alexandria, VA 25313-1450


Jane Keeney